



**STATE OF TENNESSEE  
DEPARTMENT OF FINANCE AND ADMINISTRATION  
DIVISION OF MENTAL RETARDATION SERVICES  
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**MEMORANDUM**

**TO:** All DMRS Providers  
Regional Office Staff

**FROM:** Stephen H. Norris  
DMRS Deputy Commissioner

**DATE:** August 20, 2007

**SUBJECT:** Heat Related Precautions

Warnings each year suggest more people in the United States die from extreme heat than from hurricanes, lightning, tornadoes, floods and earthquakes combined. During 1997 through 1998 a total of 7,421 deaths in the United States were attributed to excessive heat exposure. On average approximately 300 people die each year from exposure to heat. Air conditioning is the number one protective factor against heat related illness and death. Insufficient cooling of a home/motor vehicle can place people who are already at risk for heat illness at increased risk.

People suffer heat related illness when their bodies are unable to compensate and properly cool themselves. The body normally cools itself by sweating. But under some conditions, sweating just is not enough. In such cases the person's body temperature can rise rapidly.

If you must be out in the heat, then consider the following:

- Limit outdoor activity to morning and evening hours.
- Cut down on exercise; drink two to four glasses of cool fluids each hour. A sports beverage can replace the salt and minerals that is lost in sweat. Warning: if you are on a low salt diet, consult your physician before drinking a sports beverage.
- Try to rest in shady areas.
- Protect yourself from the sun by wearing a hat and sunglasses and by wearing sunscreen of SPF 15 or higher.
- Always be advised of any potential side effects of medications.

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- ❖ Licensure currently requires all facilities to maintain a temperature no greater than 85 degrees with a comfortable humidity level. When the humidity factor is high, sweat will not evaporate as quickly, preventing the body from releasing the heat quickly. Other conditions that can limit the ability to regulate temperature include old age, youth (0-4), obesity, fever, dehydration, mental illness, poor circulation, sunburn, prescription drug use, alcohol use, and those who are physically ill especially those with heart disease, seizures, high blood pressure and poor mobility.

**Prevention tips**

- Drink more fluids, regardless of activity level. Don't wait until thirsty to drink. Warning: if the doctor generally limits the amount of fluids, or has prescribed water pills, ask him how much fluids should be allowed while the weather is hot.
- Don't drink liquids that contain caffeine, alcohol or large amounts of sugar; these actually cause loss of more body fluid.
- Stay in an air-conditioned place.
- Electric fans may provide extra comfort when the temperature is high.
- Limit outdoor activity to morning and evening hours.
- Protect skin from the sun by wearing a hat and sunscreen. Sunscreen should be applied 30 minutes before going outdoors, and continue to reapply according to the instructions.
- Never leave anyone in a vehicle.
- Wear lightweight, light colored, loose fitting clothing.

Even short periods of high temperatures can cause serious health problems. Two common problems are heat stroke and heat exhaustion.

**Heat Stroke**

Heat stroke occurs when the body is unable to regulate its temperature. Many persons that we support have difficulty regulating their temperature even when they are inactive. Persons that are wheelchair bound or have severe physical disabilities are very vulnerable to heat stroke. The body's temperature rises rapidly, the sweating mechanism fails and the body is unable to cool itself. The body temperature may reach 106 degrees in a matter of a few minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided.

**Warning signs:**

- An extremely high temperature (above 103 degrees)
- Red, hot, dry skin (not sweating)
- Rapid, strong pulse
- Throbbing headache
- Dizziness
- Nausea
- Confusion
- Unconsciousness

If you see any of these signs, you may be dealing with a serious emergency. Have someone call for assistance while you begin cooling the individual.

- Get the individual to a shady area.
- Cool the individual with cool water; put them in a tub of cool water, shower or even a garden hose with cool, water if outdoors.
- Turn a fan to blow toward the individual.
- Keep cooling the individual until the body temperature drops to 101-102 degrees.

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- If emergency workers are delayed, call the ER for further directions.

**Heat Exhaustion**

Heat exhaustion is another form of heat related illness. Heat exhaustion is milder than heat stroke and occurs after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids.

**Warning signs:**

- Heavy sweating
- The individual looks pale
- Muscle cramps
- Tiredness
- Weakness
- Dizziness
- Headache
- Nausea or vomiting
- Fainting

Seek medical attention if the symptoms are severe or if the individual has heart problems, body temperature regulation problems, seizures or high blood pressure. Otherwise, help the individual cool off and seek attention if the symptoms do not improve in one hour.

Effective cooling measures in this situation may be:

- Cool beverages
- Rest
- Cool shower, bath or sponge bath
- An air-conditioned environment
- Light-weight clothing

**Heat Rash**

Heat rash may also affect individuals that you support. Heat rash looks like a cluster of red pimples or small blisters around the neck and upper chest, in the groin, under the breasts and in elbow creases.

The best treatment for heat rash is to provide the individual with a cooler, less humid environment, and keep the affected area dry. Do not use creams, ointment or lotion, as these tend to keep the area moist. Do use a powder if the individual is not allergic.

During hot weather, stay indoors, pace yourself, schedule outdoor activities carefully, monitor those at risk and adjust to the environment.

When the home cooling system is not cooling adequately, monitor the home temperature as well as the individual. Each person has a temperature that they are comfortable with, and it is important for support staff to be observant and responsive. If the individual appears to be uncomfortable in the home temperature, call your home manager and report the air-cooling problem, and take the individual to a cooler location. If at any time you are not certain or have a concern about an individual's response to the heat, call for help.

The best defense against heat related illness is prevention. Staying cool and making simple changes in fluid intake, activities, air conditioning and clothing during hot weather can help us all remain safe and healthy.

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In the event an individual's home cooling system is not functioning adequately and emergency relief is needed, please contact your ISC during regular office hours (for expedited services) or the crisis pager in your region. The administrator on duty can assist you.

**Vehicle Alert**

In conjunction with ensuring that the cooling system is working properly for the home, agencies/staff should ensure that the same holds true of vehicles/vans that individuals are transported in. Staff should immediately notify key agency management staff in the event of inadequately working cooling systems in transportation vehicles for individuals.

As a reminder, agencies should ensure that training occurs with staff related to the following:

- Not leaving individuals in hot vehicles
- Ensuring that transportation vehicles are cooled prior to getting in vehicles
- That transportation vehicle is checked to ensure that no one is left in the vehicle at the end of travel.

SHN:MO

Attachment: First Aid for Heat-Induced Illnesses

copy: Central Office Staff  
Regional Office Staff

# First Aid for Heat-Induced Illnesses

Extreme heat brings with it the possibility of heat-induced illnesses. The following table lists these illnesses, their symptoms, and the first aid treatment.

Condition	Symptoms	First Aid
Sunburn	Skin redness and pain, possible swelling, blisters, fever, headaches	<p>Take a shower using soap to remove oils that may block pores, preventing the body from cooling naturally.</p> <p>Apply dry, sterile dressings to any blisters, and get medical attention.</p>
Heat Cramps	Painful spasms, usually in leg and abdominal muscles; heavy sweating	<p>Get the victim to a cooler location.</p> <p>Lightly stretch and gently massage affected muscles to relieve spasms.</p> <p>Give sips of up to a half glass of cool water every 15 minutes. (Do not give liquids with caffeine or alcohol.)</p> <p>Discontinue liquids, if victim is nauseated.</p>
Heat Exhaustion	Heavy sweating but skin may be cool, pale, or flushed. Weak pulse. Normal body temperature is possible, but temperature will likely rise. Fainting or dizziness, nausea, vomiting, exhaustion, and headaches are possible.	<p>Get victim to lie down in a cool place.</p> <p>Loosen or remove clothing.</p> <p>Apply cool, wet clothes.</p> <p>Fan or move victim to air-conditioned place.</p> <p>Give sips of water if victim is conscious.</p> <p>Be sure water is consumed slowly.</p> <p>Give half glass of cool water every 15 minutes.</p> <p>Discontinue water if victim is nauseated.</p> <p>Seek immediate medical attention if vomiting occurs.</p>
Heat Stroke ( a severe medical emergency)	High body temperature (105+); hot, red, dry skin; rapid, weak pulse; and rapid shallow breathing. Victim will probably not sweat unless victim was sweating from recent strenuous activity. Possible unconsciousness.	<p>Call 9-1-1 or emergency medical services, or get the victim to a hospital immediately. Delay can be fatal.</p> <p>Move victim to a cooler environment.</p> <p>Removing clothing</p> <p>Try a cool bath, sponging, or wet sheet to reduce body temperature.</p> <p>Watch for breathing problems.</p> <p>Use extreme caution.</p> <p>Use fans and air conditioners.</p>